FIG. 1

LEAD-IN AREA	DESCRIPTION	USE PURPOSE
READ-ONLY ZONE (5)	PITS OR HIGH FREQUENCY WOBBLES	DISC-RELATED CONTROL DATA
RECORDABLE ZONE (10)	DMA (10a)	DEFECT MANAGEMENT
	CONTROL DATA ZONE (10b)	DATA INFORMATION (CONTROL DATA)
	OPC TEST ZONE (10c)	OPC TESTING (OPC DATA)
	DRIVE & DISC ZONE (10d)	INFORMATION ON DRIVE AND INFORMATION ON THE STATE OF DISC
	BUFFER ZONE (10e)	BUFFER FOR USER DATA AREA

FIG. 2

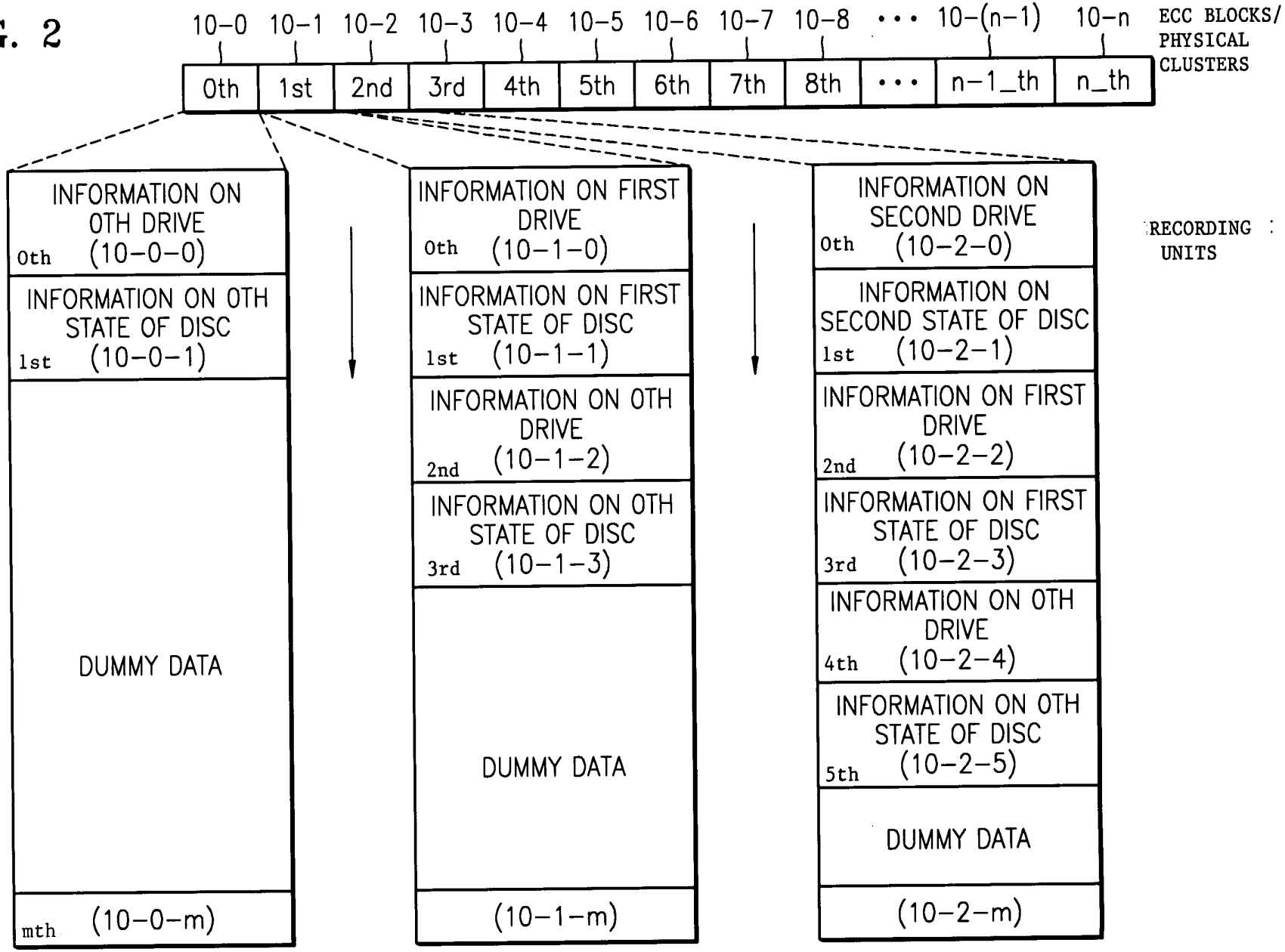
10-0 10-1 10-2 10-3 10-4 10-5 10-6 10-7 10-8 ••• 10-(n-1) 10-n
ECC BLOCKS/ PHYSICAL CLUSTERS
0th 1st 2nd 3rd 4th 5th 6th 7th 8th ••• n-1_th n_th
INFORMATION ON 0TH DRIVE 0th (10-0-0)
INFORMATION ON 0TH STATE OF DISC 1st (10-0-1)
DUMMY DATA
mth (10-0-m)
INFORMATION ON FIRST DRIVE 0th (10-1-0)
INFORMATION ON FIRST STATE OF DISC 1st (10-1-1)
INFORMATION ON 0TH DRIVE 2nd (10-1-2)
INFORMATION ON 0TH STATE OF DISC 3rd (10-1-3)
DUMMY DATA
(10-1-m)
INFORMATION ON SECOND DRIVE 0th (10-2-0)
INFORMATION ON SECOND STATE OF DISC 1st (10-2-1)
INFORMATION ON FIRST DRIVE 2nd (10-2-2)
INFORMATION ON FIRST STATE OF DISC 3rd (10-2-3)
INFORMATION ON 0TH DRIVE 4th (10-2-4)
INFORMATION ON 0TH STATE OF DISC 5th (10-2-5)
DUMMY DATA
(10-2-m)
RECORDING UNITS

FIG. 3

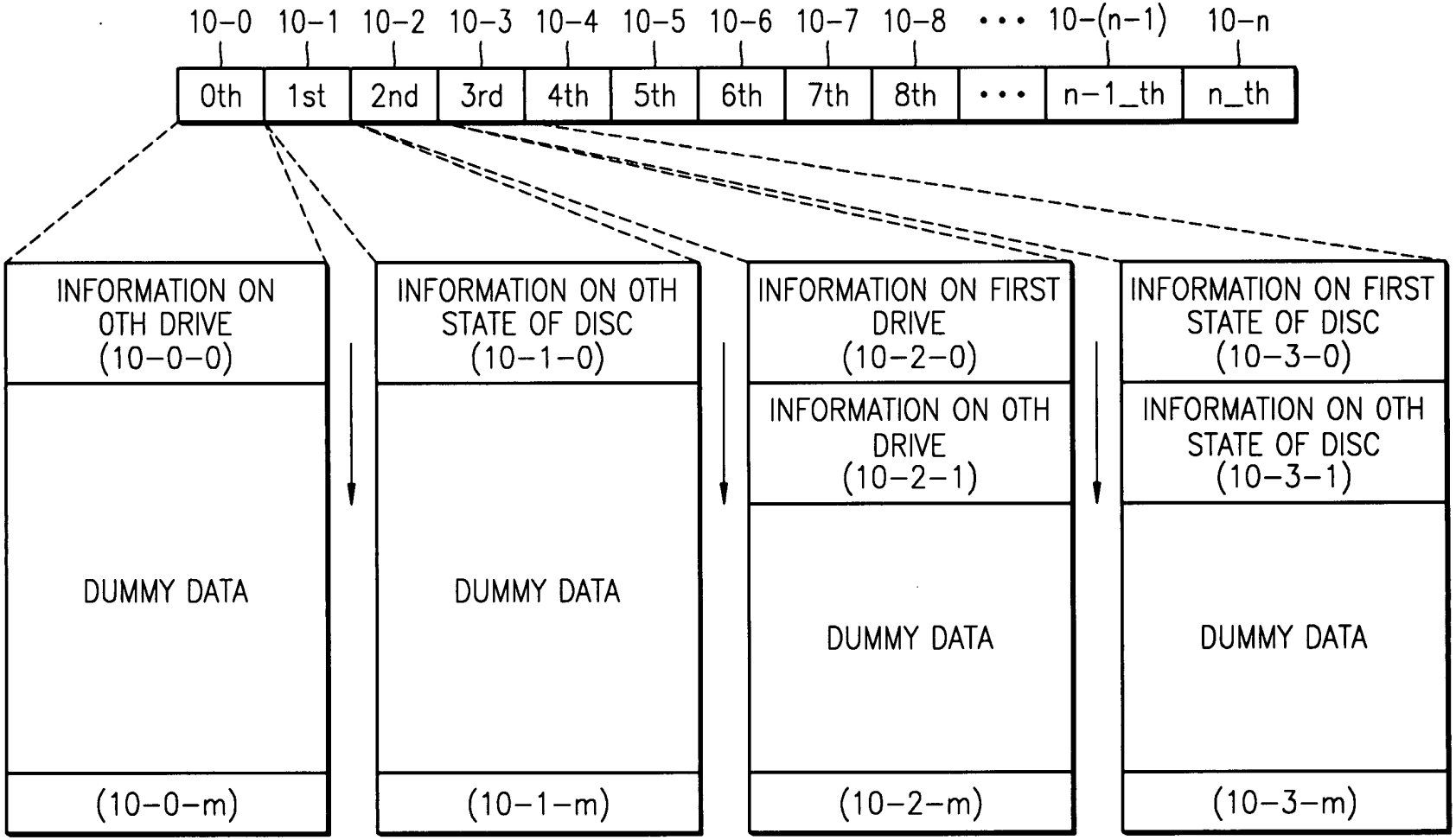
10-0
10-1
10-2
10-3
10-4
10-5
10-6
10-7
10-8
• • •
10-(n-1)
10-n
0th
1st
2nd
3rd
4th
5th
6th
7th
8th
• • •
n-1_th
n_th
INFORMATION ON 0TH DRIVE (10-0-0)
DUMMY DATA
(10-0-m)
INFORMATION ON 0TH STATE OF DISC (10-1-0)
DUMMY DATA
(10-1-m)
INFORMATION ON FIRST DRIVE (10-2-0)
INFORMATION ON 0TH DRIVE (10-2-1)
DUMMY DATA
(10-2-m)
INFORMATION ON FIRST STATE OF DISC (10-3-0)
INFORMATION ON 0TH STATE OF DISC (10-3-1)
DUMMY DATA
(10-3-m)

FIG. 4A

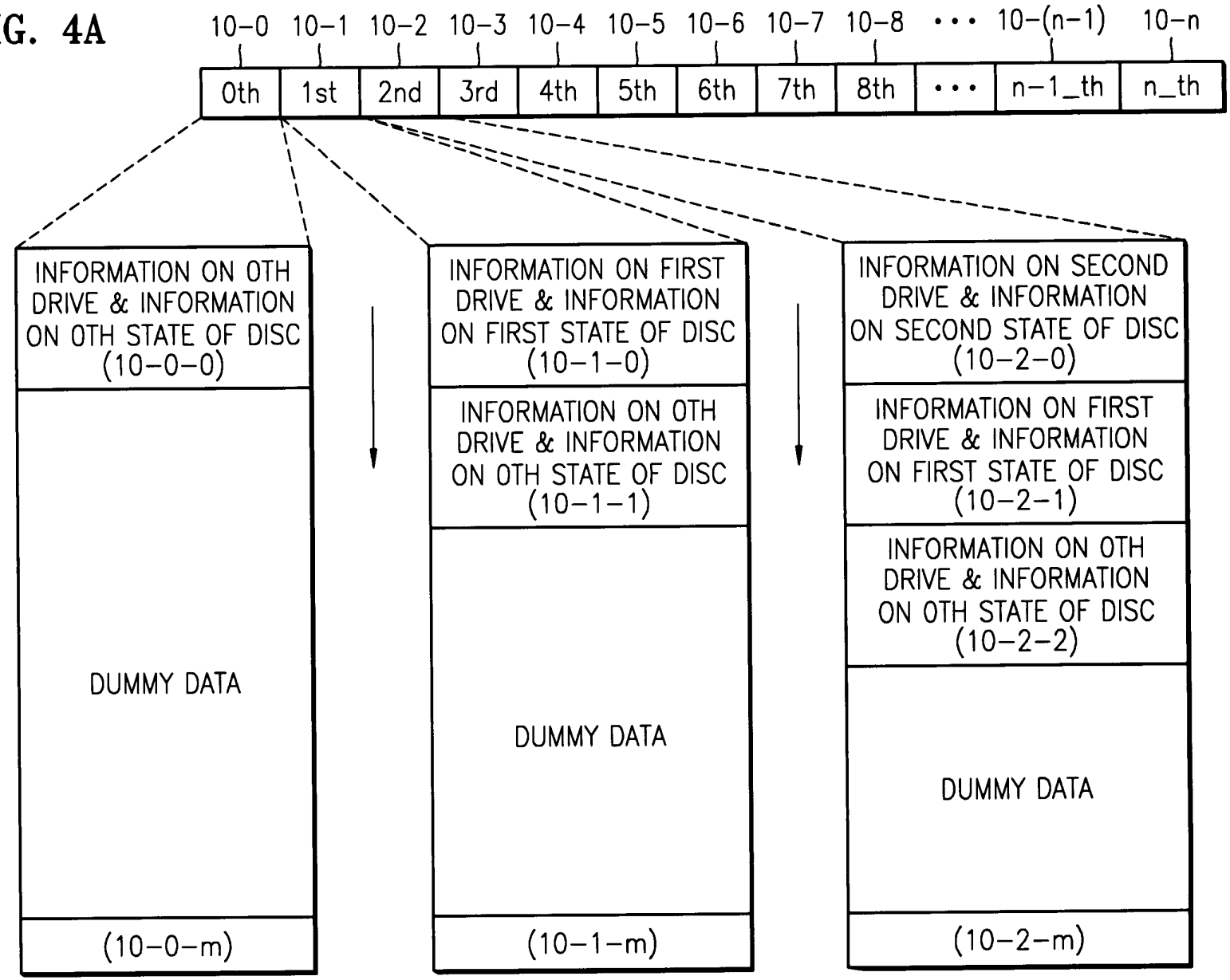
10-0
10-1
10-2
10-3
10-4
10-5
10-6
10-7
10-8
• • •
10-(n-1)
10-n
0th
1st
2nd
3rd
4th
5th
6th
7th
8th
• • •
n-1_th
n_th
INFORMATION ON 0TH DRIVE & INFORMATION ON 0TH STATE OF DISC (10-0-0)
DUMMY DATA
(10-0-m)
INFORMATION ON FIRST DRIVE & INFORMATION ON FIRST STATE OF DISC (10-1-0)
INFORMATION ON 0TH DRIVE & INFORMATION ON 0TH STATE OF DISC (10-1-1)
DUMMY DATA
(10-1-m)
INFORMATION ON SECOND DRIVE & INFORMATION ON SECOND STATE OF DISC (10-2-0)
INFORMATION ON FIRST DRIVE & INFORMATION ON FIRST STATE OF DISC (10-2-1)
INFORMATION ON 0TH DRIVE & INFORMATION ON 0TH STATE OF DISC (10-2-2)
DUMMY DATA
(10-2-m)

FIG. 4B

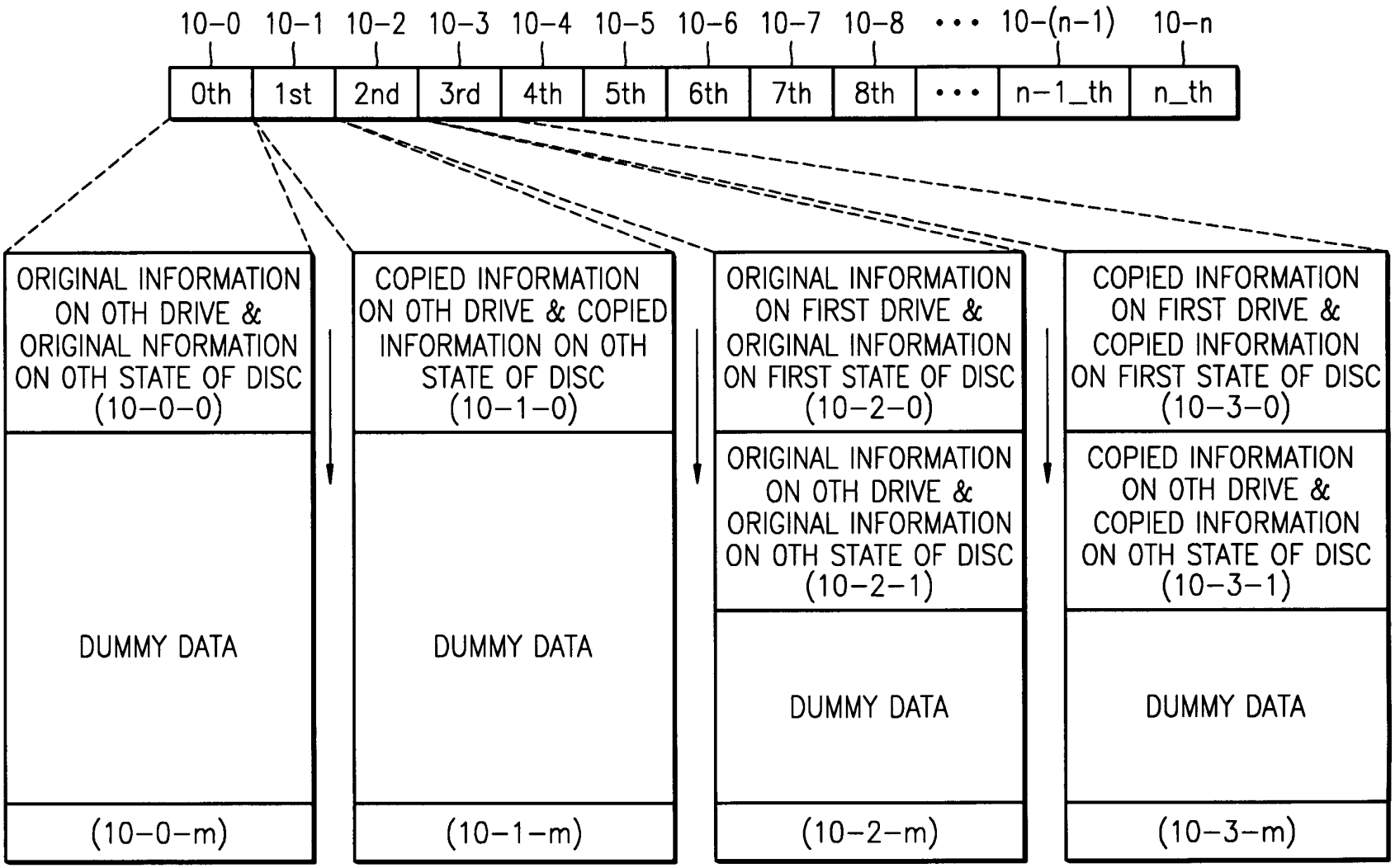
10-0
10-1
10-2
10-3
10-4
10-5
10-6
10-7
10-8
• • •
10-(n-1)
10-n
0th
1st
2nd
3rd
4th
5th
6th
7th
8th
• • •
n-1_th
n_th
ORIGINAL INFORMATION ON 0TH DRIVE & ORIGINAL NFORMATION ON 0TH STATE OF DISC (10-0-0)
DUMMY DATA
(10-0-m)
COPIED INFORMATION ON 0TH DRIVE & COPIED INFORMATION ON 0TH STATE OF DISC (10-1-0)
DUMMY DATA
(10-1-m)
ORIGINAL INFORMATION ON FIRST DRIVE & ORIGINAL INFORMATION ON FIRST STATE OF DISC (10-2-0)
ORIGINAL INFORMATION ON 0TH DRIVE & ORIGINAL INFORMATION ON 0TH STATE OF DISC (10-2-1)
DUMMY DATA
(10-2-m)
COPIED INFORMATION ON FIRST DRIVE & COPIED INFORMATION ON FIRST STATE OF DISC (10-3-0)
COPIED INFORMATION ON 0TH DRIVE & COPIED INFORMATION ON 0TH STATE OF DISC (10-3-1)
DUMMY DATA
(10-3-m)

FIG. 5

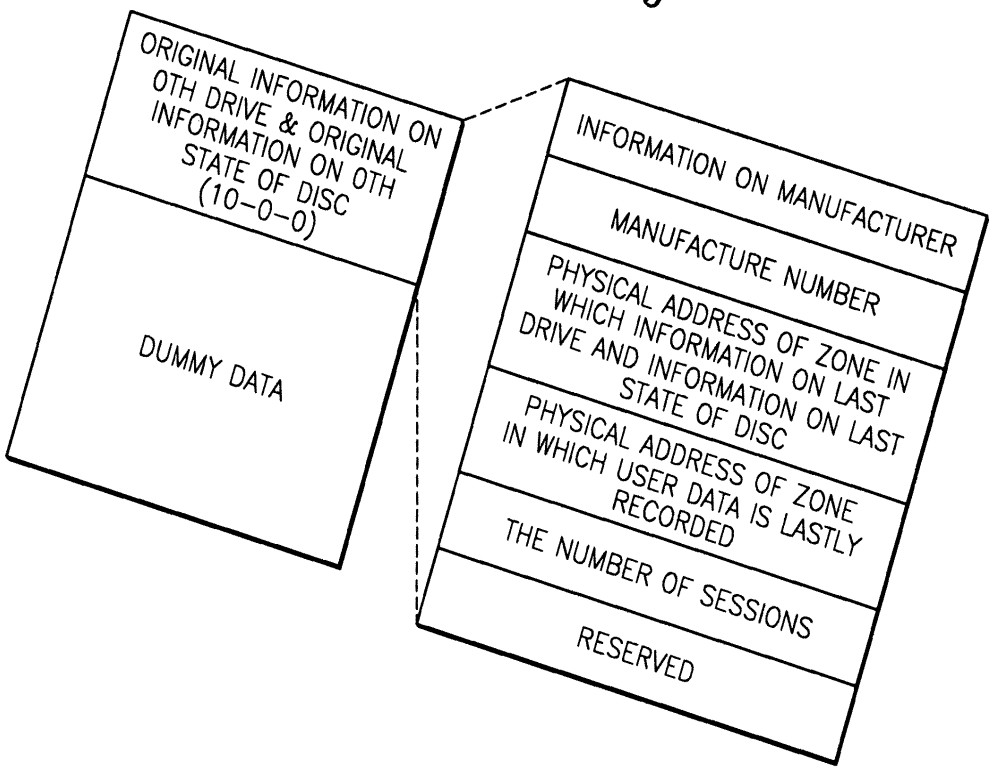
ORIGINAL INFORMATION ON 0TH DRIVE & ORIGINAL INFORMATION ON 0TH STATE OF DISC (10-0-0)
DUMMY DATA
INFORMATION ON MANUFACTURER
MANUFACTURE NUMBER
PHYSICAL ADDRESS OF ZONE IN WHICH INFORMATION ON LAST DRIVE AND INFORMATION ON LAST STATE OF DISC
PHYSICAL ADDRESS OF ZONE IN WHICH USER DATA IS LASTLY RECORDED
THE NUMBER OF SESSIONS
RESERVED

FIG. 6A

LEAD-IN AREA	DESCRIPTION	USE PURPOSE
READ-ONLY ZONE (5)	PITS OR HIGH FREQUENCY WOBBLES	DISC-RELATED CONTROL DATA
RECORDABLE ZONE (10)	DMA (10a)	DEFECT MANAGEMENT
	CONTROL DATA ZONE (10b)	DATA INFORMATION (CONTROL DATA)
	OPC TEST ZONE (10c)	OPC TESTING (OPC DATA)
	DRIVE & DISC ZONE (10d)	DRIVE-RELATED INFORMATION
		DISC STATE-RELATED INFORMATION
	BUFFER ZONE (10e)	BUFFER FOR USER DATA ZONE

FIG. 6B

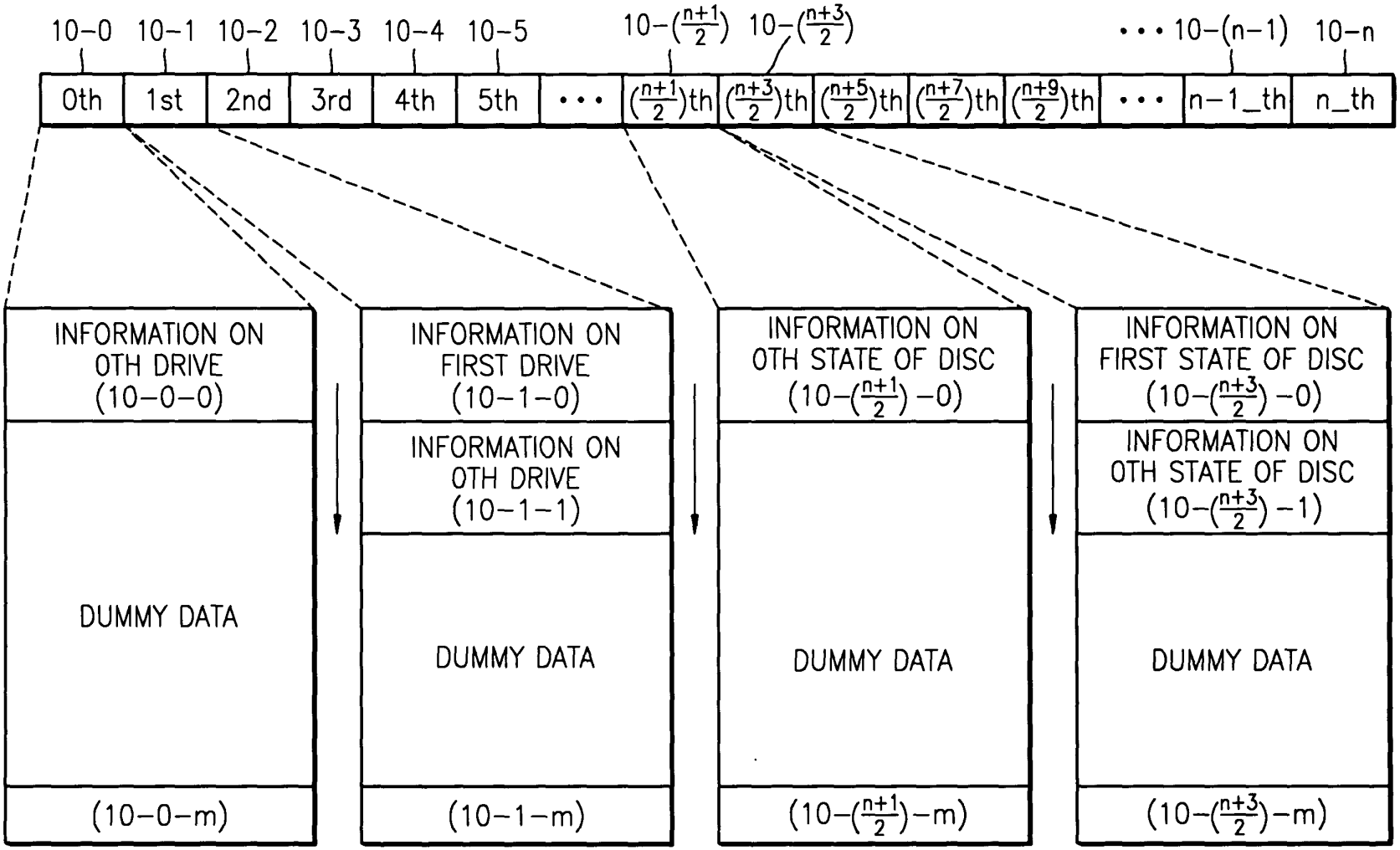
10-0
10-1
10-2
10-3
10-4
10-5
10-(n+1/2)
10-(n+3/2)
• • • 10-(n-1)
10-n
0th
1st
2nd
3rd
4th
5th
• • •
(n+1/2)th
(n+3/2)th
(n+5/2)th
(n+7/2)th
(n+9/2)th
• • •
n-1_th
n_th
INFORMATION ON 0TH DRIVE (10-0-0)
DUMMY DATA
(10-0-m)
INFORMATION ON FIRST DRIVE (10-1-0)
INFORMATION ON 0TH DRIVE (10-1-1)
DUMMY DATA
(10-1-m)
INFORMATION ON 0TH STATE OF DISC (10-(n+1/2)-0)
DUMMY DATA
(10-(n+1/2)-m)
INFORMATION ON FIRST STATE OF DISC (10-(n+3/2)-0)
INFORMATION ON 0TH STATE OF DISC (10-(n+3/2)-1)
DUMMY DATA
(10-(n+3/2)-m)

FIG. 7A

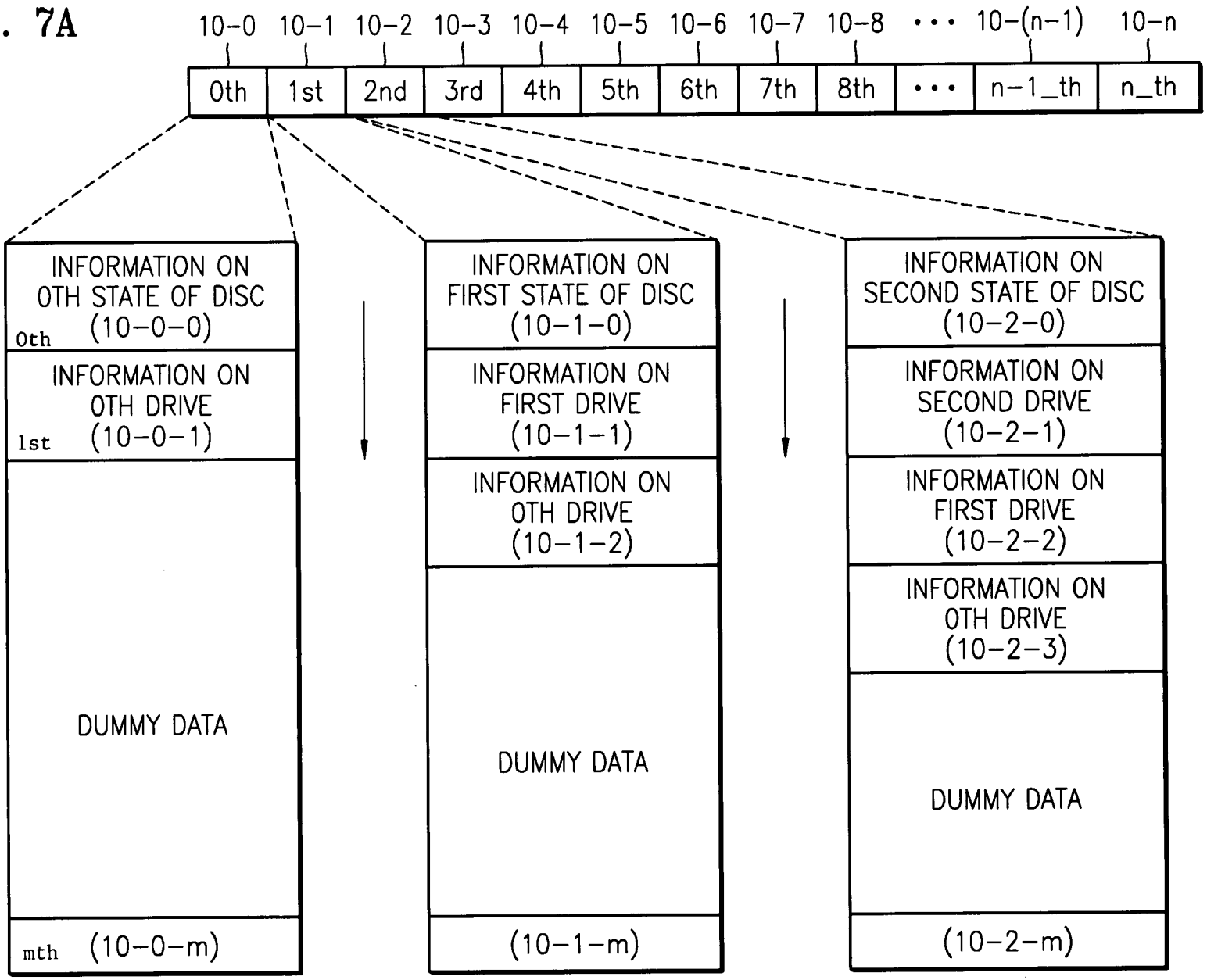
10-0
10-1
10-2
10-3
10-4
10-5
10-6
10-7
10-8
• • •
10-(n-1)
10-n
0th
1st
2nd
3rd
4th
5th
6th
7th
8th
• • •
n-1_th
n_th
INFORMATION ON 0TH STATE OF DISC (10-0-0)
0th
INFORMATION ON 0TH DRIVE (10-0-1)
1st
DUMMY DATA
mth (10-0-m)
INFORMATION ON FIRST STATE OF DISC (10-1-0)
INFORMATION ON FIRST DRIVE (10-1-1)
INFORMATION ON 0TH DRIVE (10-1-2)
DUMMY DATA
(10-1-m)
INFORMATION ON SECOND STATE OF DISC (10-2-0)
INFORMATION ON SECOND DRIVE (10-2-1)
INFORMATION ON FIRST DRIVE (10-2-2)
INFORMATION ON 0TH DRIVE (10-2-3)
DUMMY DATA
(10-2-m)

FIG. 7B

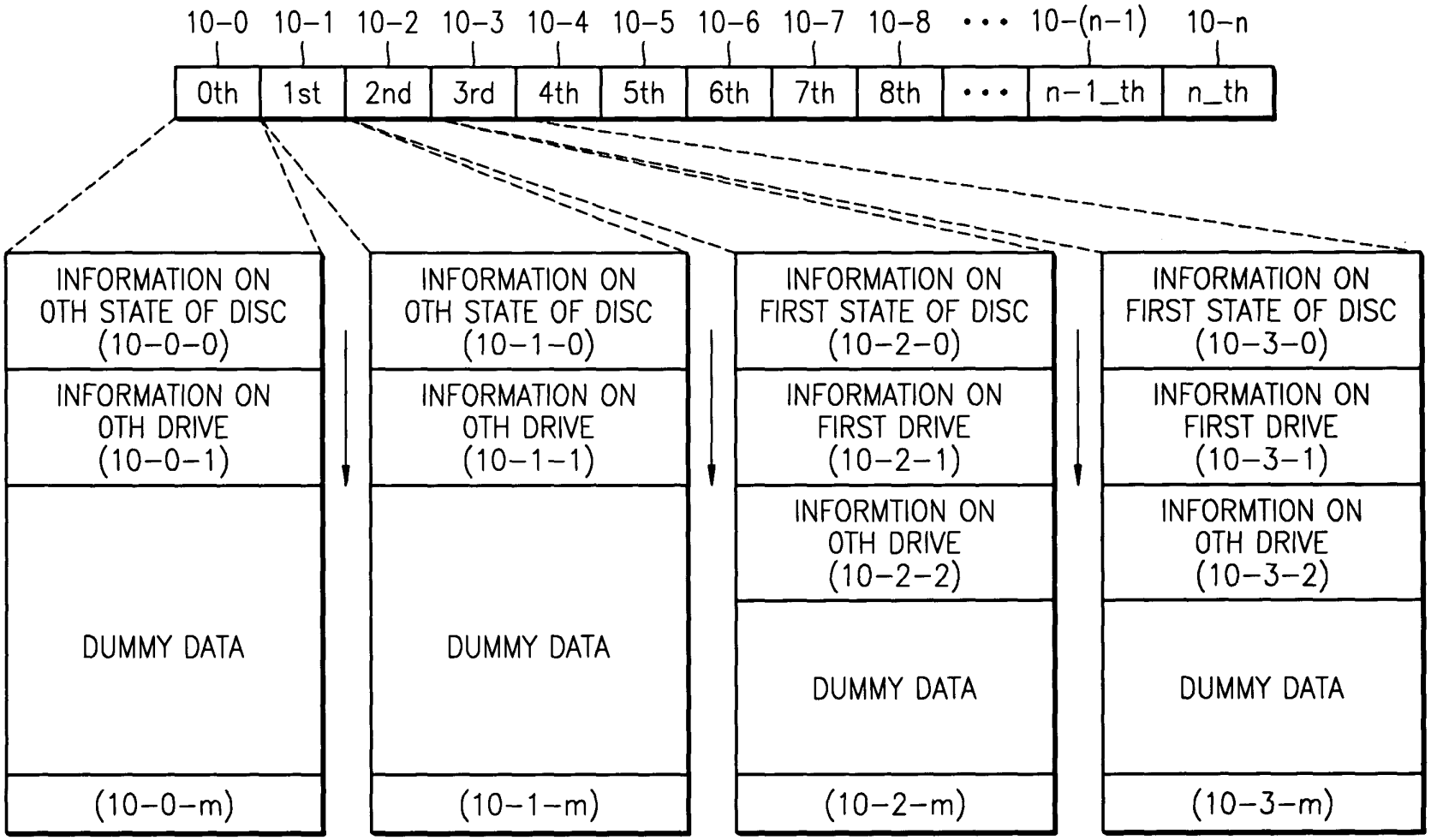
10-0
10-1
10-2
10-3
10-4
10-5
10-6
10-7
10-8
• • •
10-(n-1)
10-n
0th
1st
2nd
3rd
4th
5th
6th
7th
8th
• • •
n-1_th
n_th
INFORMATION ON 0TH STATE OF DISC (10-0-0)
INFORMATION ON 0TH DRIVE (10-0-1)
DUMMY DATA
(10-0-m)
INFORMATION ON 0TH STATE OF DISC (10-1-0)
INFORMATION ON 0TH DRIVE (10-1-1)
DUMMY DATA
(10-1-m)
INFORMATION ON FIRST STATE OF DISC (10-2-0)
INFORMATION ON FIRST DRIVE (10-2-1)
INFORMTION ON 0TH DRIVE (10-2-2)
DUMMY DATA
(10-2-m)
INFORMATION ON FIRST STATE OF DISC (10-3-0)
INFORMATION ON FIRST DRIVE (10-3-1)
INFORMTION ON 0TH DRIVE (10-3-2)
DUMMY DATA
(10-3-m)

FIG. 8A

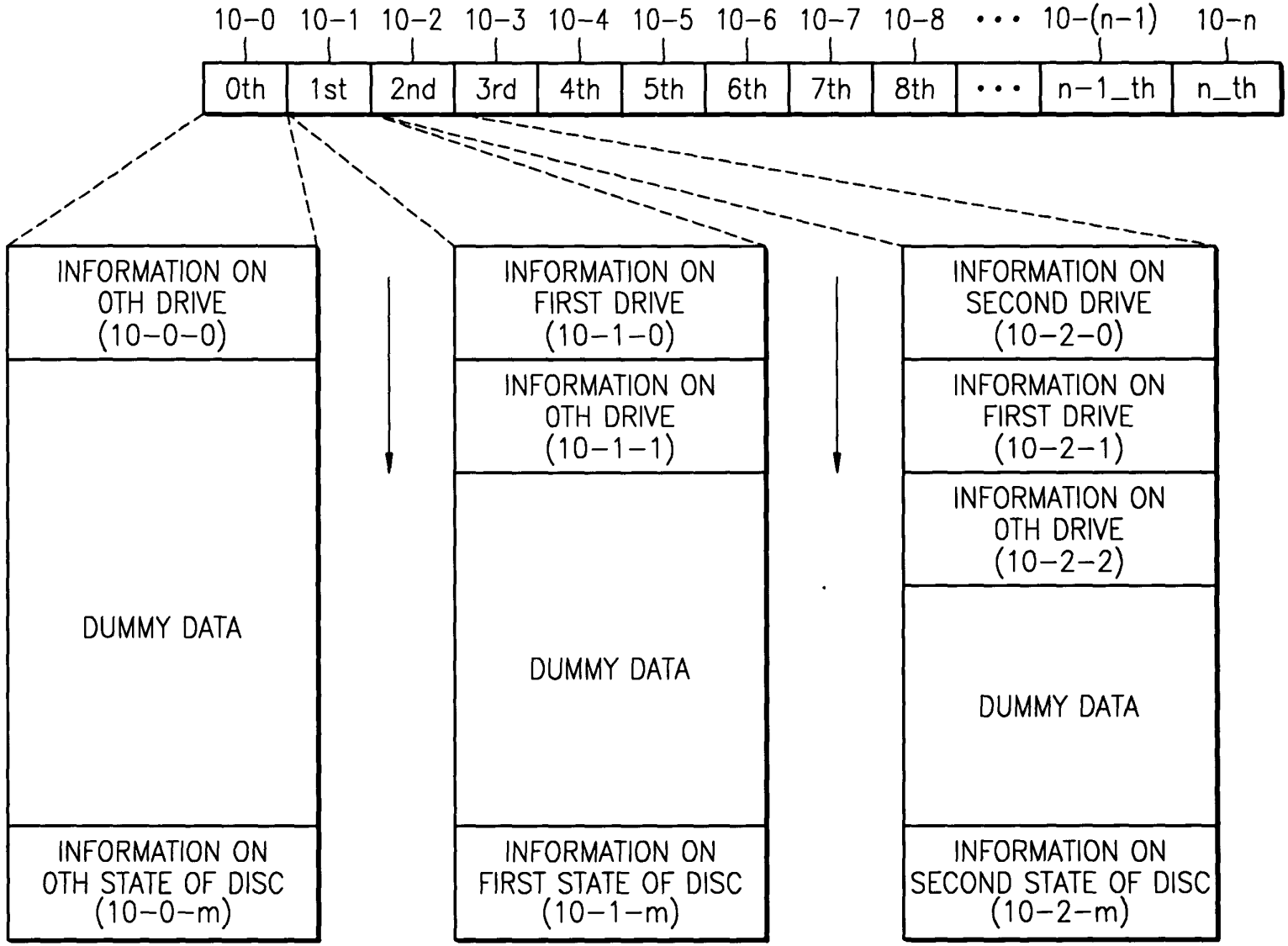
10-0
10-1
10-2
10-3
10-4
10-5
10-6
10-7
10-8
• • •
10-(n-1)
10-n
0th
1st
2nd
3rd
4th
5th
6th
7th
8th
• • •
n-1_th
n_th
INFORMATION ON 0TH DRIVE (10-0-0)
DUMMY DATA
INFORMATION ON 0TH STATE OF DISC (10-0-m)
INFORMATION ON FIRST DRIVE (10-1-0)
INFORMATION ON 0TH DRIVE (10-1-1)
DUMMY DATA
INFORMATION ON FIRST STATE OF DISC (10-1-m)
INFORMATION ON SECOND DRIVE (10-2-0)
INFORMATION ON FIRST DRIVE (10-2-1)
INFORMATION ON 0TH DRIVE (10-2-2)
DUMMY DATA
INFORMATION ON SECOND STATE OF DISC (10-2-m)

FIG. 8B

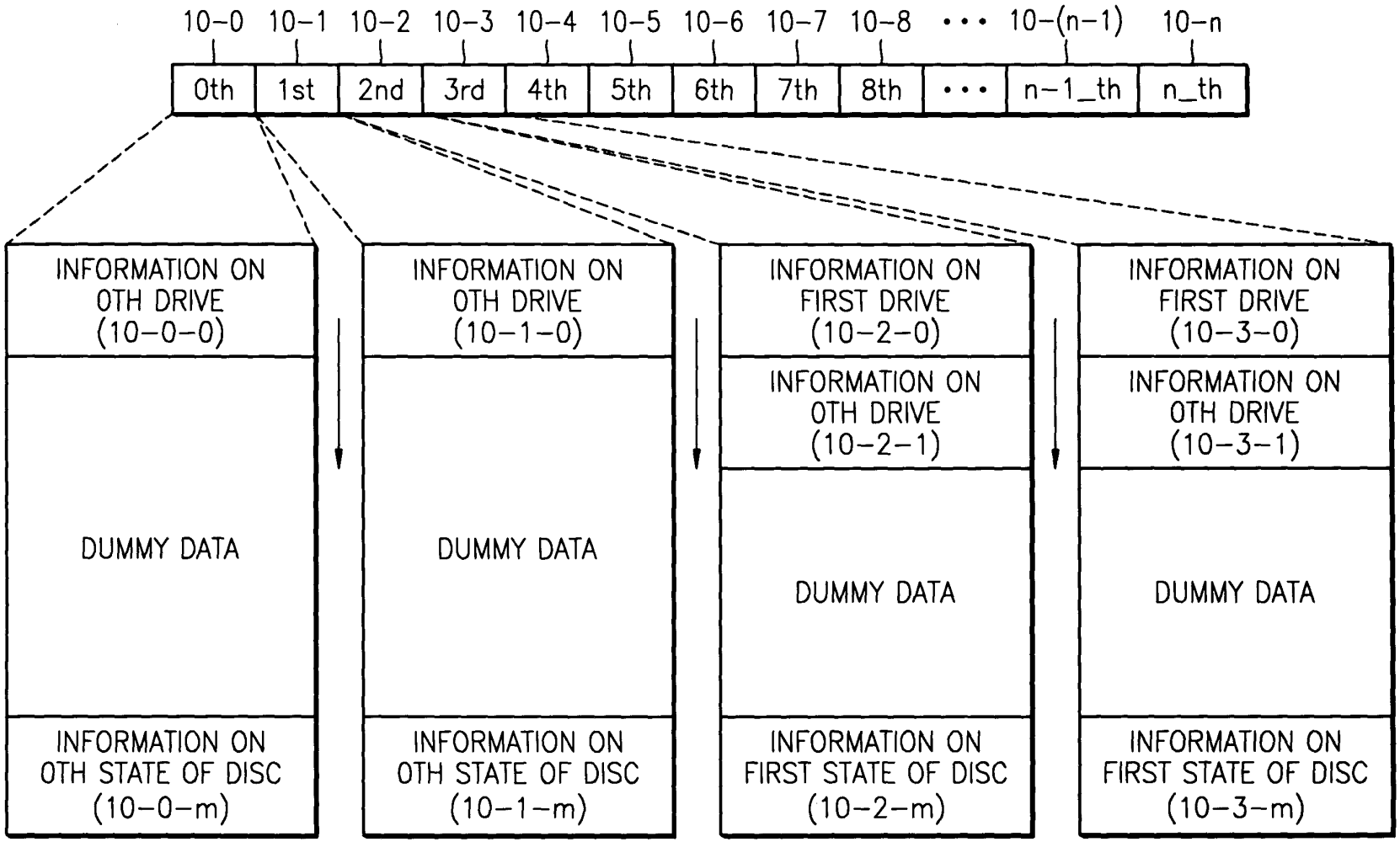
10-0
10-1
10-2
10-3
10-4
10-5
10-6
10-7
10-8
• • •
10-(n-1)
10-n
0th
1st
2nd
3rd
4th
5th
6th
7th
8th
• • •
n-1_th
n_th
INFORMATION ON 0TH DRIVE (10-0-0)
DUMMY DATA
INFORMATION ON 0TH STATE OF DISC (10-0-m)
INFORMATION ON 0TH DRIVE (10-1-0)
DUMMY DATA
INFORMATION ON 0TH STATE OF DISC (10-1-m)
INFORMATION ON FIRST DRIVE (10-2-0)
INFORMATION ON 0TH DRIVE (10-2-1)
DUMMY DATA
INFORMATION ON FIRST STATE OF DISC (10-2-m)
INFORMATION ON FIRST DRIVE (10-3-0)
INFORMATION ON 0TH DRIVE (10-3-1)
DUMMY DATA
INFORMATION ON FIRST STATE OF DISC (10-3-m)

FIG. 9

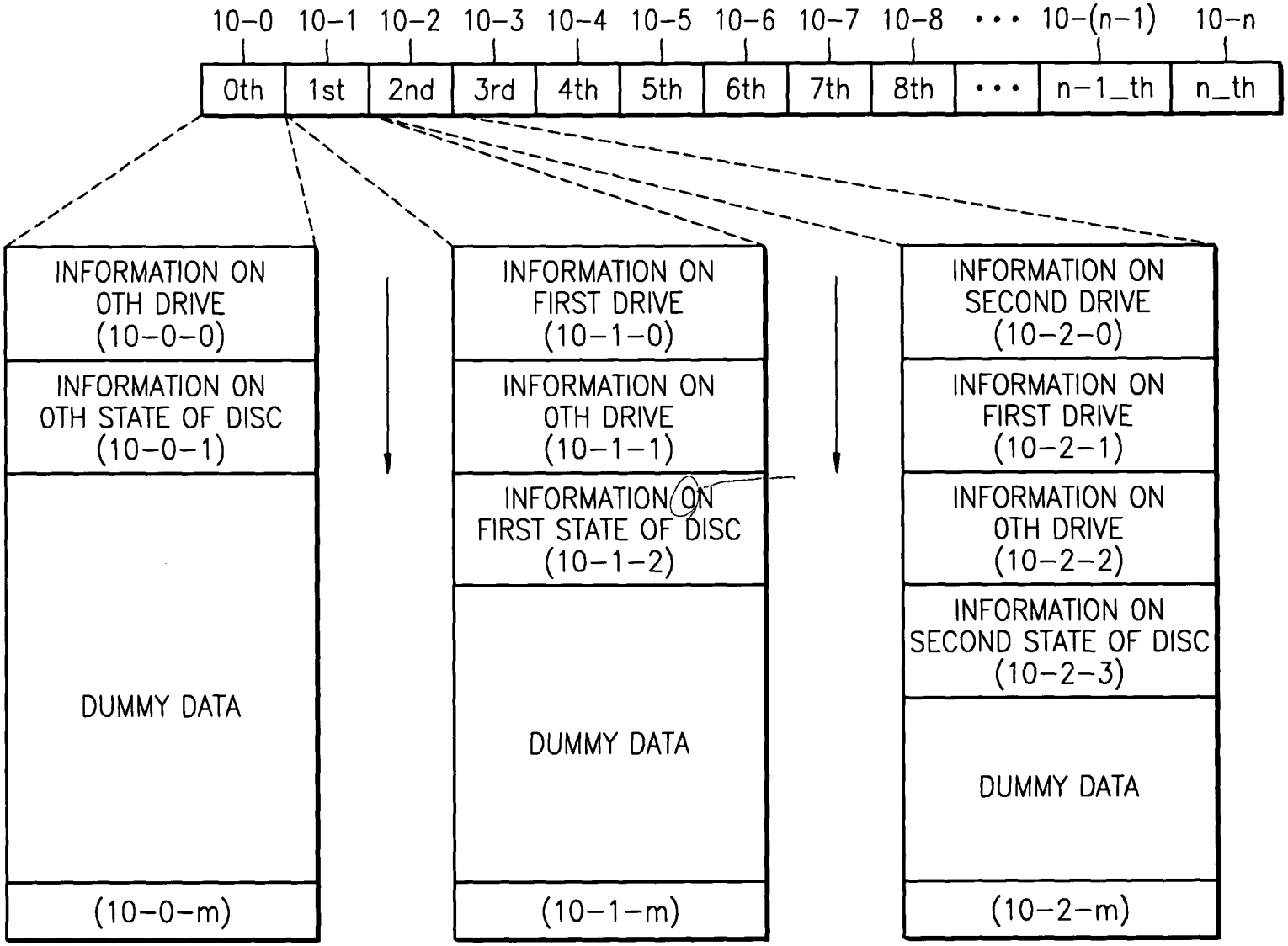
10-0
10-1
10-2
10-3
10-4
10-5
10-6
10-7
10-8
• • •
10-(n-1)
10-n
0th
1st
2nd
3rd
4th
5th
6th
7th
8th
• • •
n-1_th
n_th
INFORMATION ON 0TH DRIVE (10-0-0)
INFORMATION ON 0TH STATE OF DISC (10-0-1)
DUMMY DATA
(10-0-m)
INFORMATION ON FIRST DRIVE (10-1-0)
INFORMATION ON 0TH DRIVE (10-1-1)
INFORMATION ON FIRST STATE OF DISC (10-1-2)
DUMMY DATA
(10-1-m)
INFORMATION ON SECOND DRIVE (10-2-0)
INFORMATION ON FIRST DRIVE (10-2-1)
INFORMATION ON 0TH DRIVE (10-2-2)
INFORMATION ON SECOND STATE OF DISC (10-2-3)
DUMMY DATA
(10-2-m)

FIG. 10A

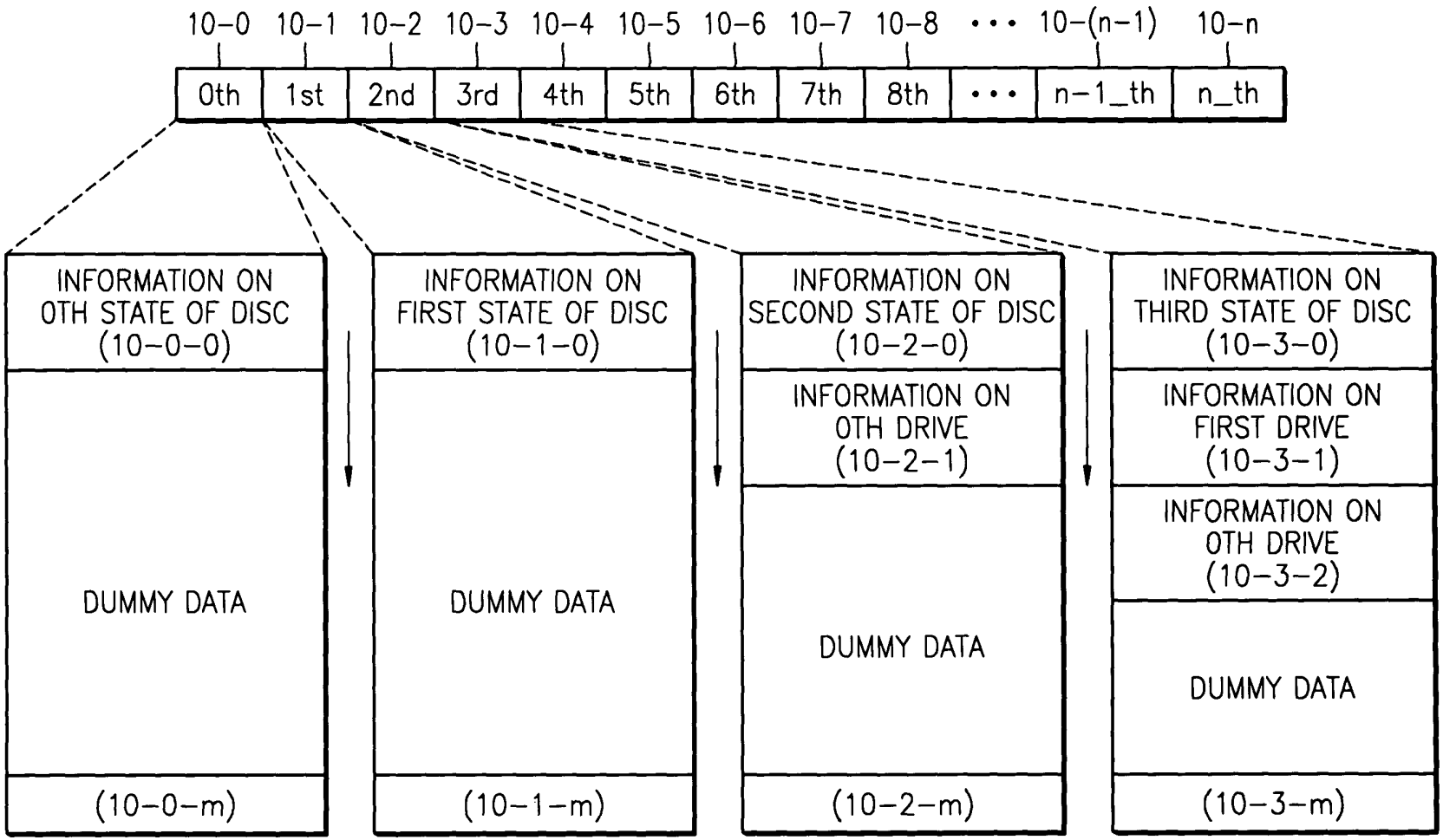
10-0
10-1
10-2
10-3
10-4
10-5
10-6
10-7
10-8
• • •
10-(n-1)
10-n
0th
1st
2nd
3rd
4th
5th
6th
7th
8th
• • •
n-1_th
n_th
INFORMATION ON 0TH STATE OF DISC (10-0-0)
DUMMY DATA
(10-0-m)
INFORMATION ON FIRST STATE OF DISC (10-1-0)
DUMMY DATA
(10-1-m)
INFORMATION ON SECOND STATE OF DISC (10-2-0)
INFORMATION ON 0TH DRIVE (10-2-1)
DUMMY DATA
(10-2-m)
INFORMATION ON THIRD STATE OF DISC (10-3-0)
INFORMATION ON FIRST DRIVE (10-3-1)
INFORMATION ON 0TH DRIVE (10-3-2)
DUMMY DATA
(10-3-m)

FIG. 10B

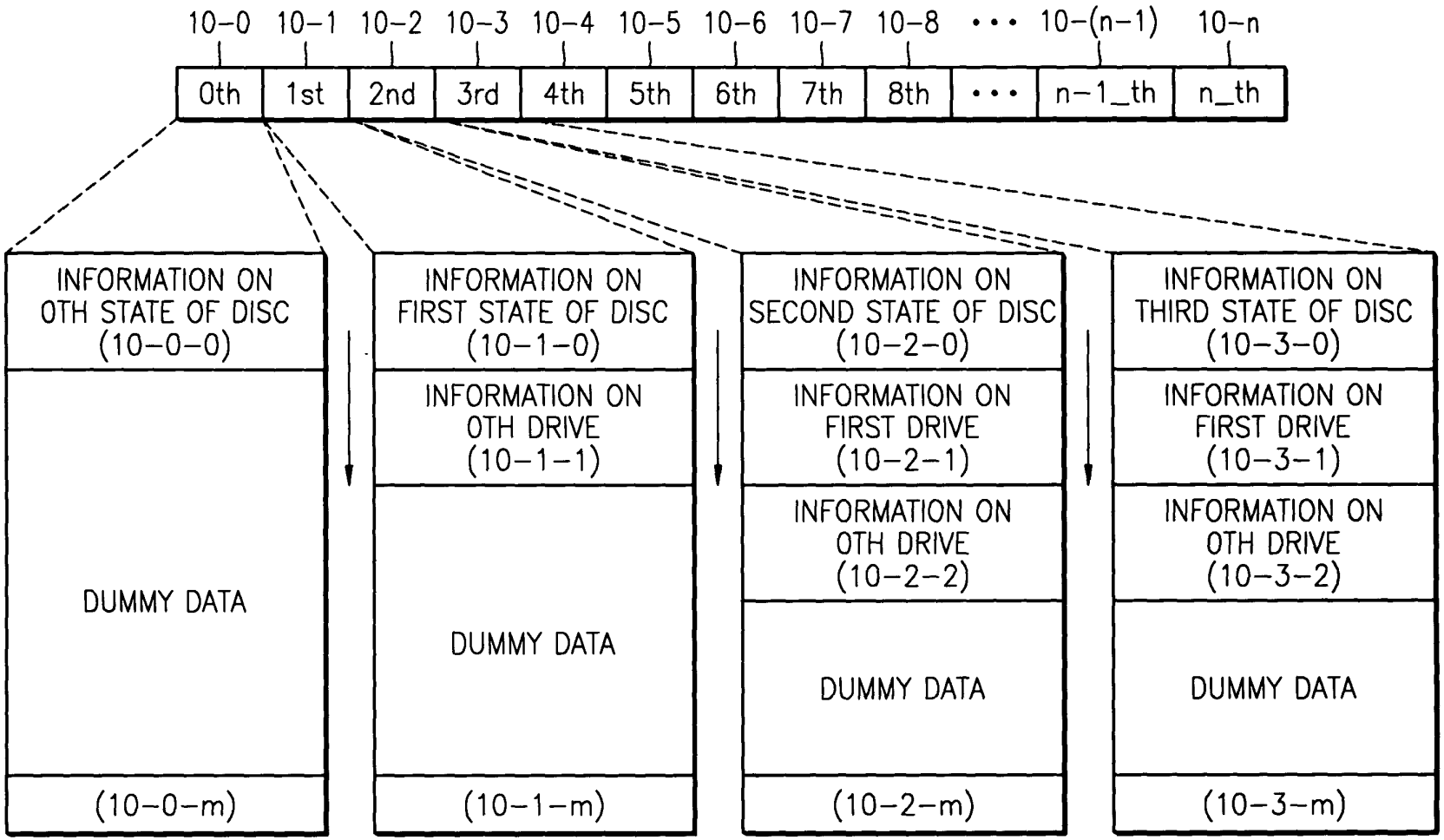
10-0
10-1
10-2
10-3
10-4
10-5
10-6
10-7
10-8
• • •
10-(n-1)
10-n
0th
1st
2nd
3rd
4th
5th
6th
7th
8th
• • •
n-1_th
n_th
INFORMATION ON 0TH STATE OF DISC (10-0-0)
INFORMATION ON FIRST STATE OF DISC (10-1-0)
INFORMATION ON SECOND STATE OF DISC (10-2-0)
INFORMATION ON THIRD STATE OF DISC (10-3-0)
INFORMATION ON 0TH DRIVE (10-1-1)
INFORMATION ON FIRST DRIVE (10-2-1)
INFORMATION ON FIRST DRIVE (10-3-1)
INFORMATION ON 0TH DRIVE (10-2-2)
INFORMATION ON 0TH DRIVE (10-3-2)
DUMMY DATA
DUMMY DATA
DUMMY DATA
DUMMY DATA
(10-0-m)
(10-1-m)
(10-2-m)
(10-3-m)

FIG. 10C

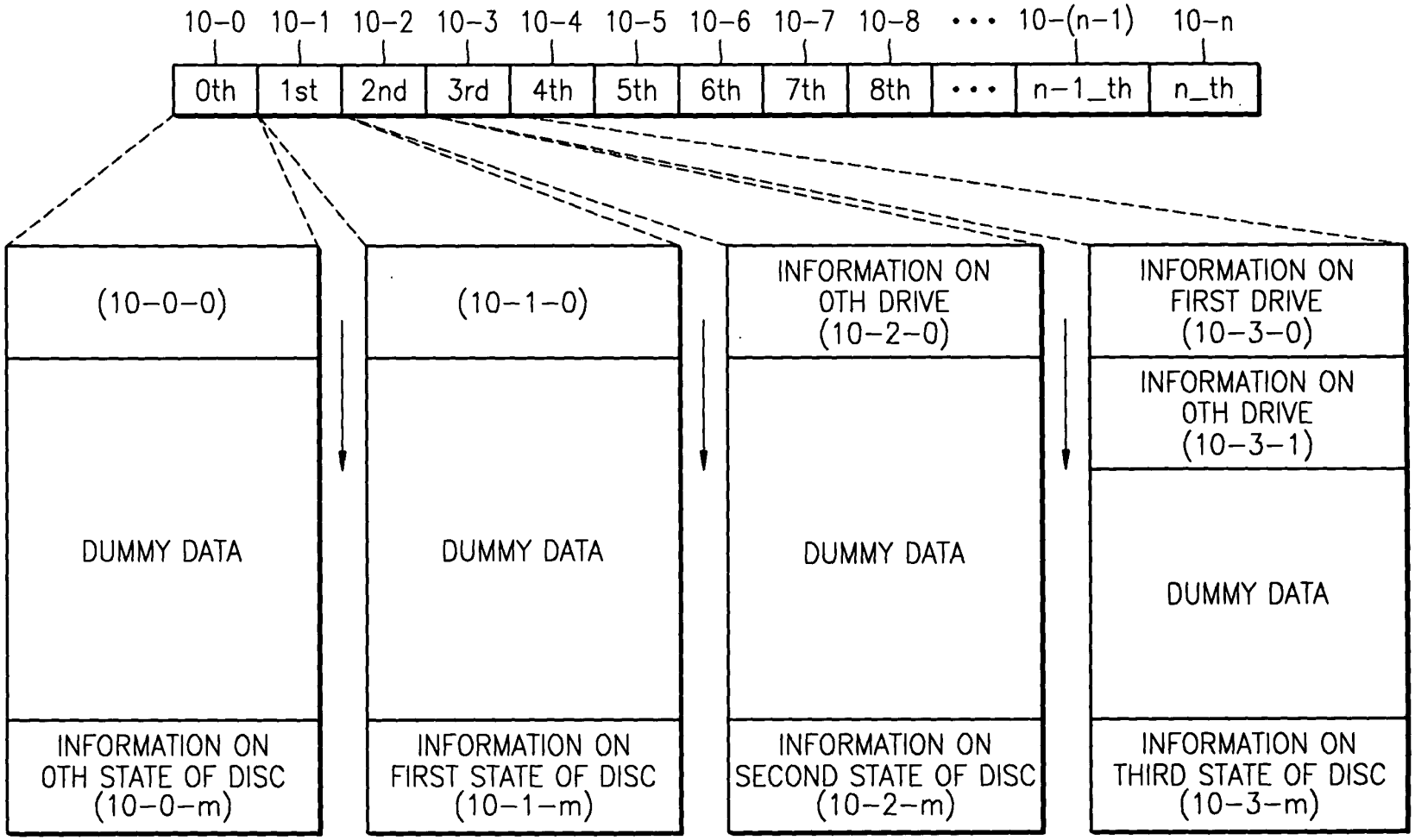
10-0
10-1
10-2
10-3
10-4
10-5
10-6
10-7
10-8
• • •
10-(n-1)
10-n
0th
1st
2nd
3rd
4th
5th
6th
7th
8th
• • •
n-1_th
n_th
(10-0-0)
DUMMY DATA
INFORMATION ON 0TH STATE OF DISC (10-0-m)
(10-1-0)
DUMMY DATA
INFORMATION ON FIRST STATE OF DISC (10-1-m)
INFORMATION ON 0TH DRIVE (10-2-0)
DUMMY DATA
INFORMATION ON SECOND STATE OF DISC (10-2-m)
INFORMATION ON FIRST DRIVE (10-3-0)
INFORMATION ON 0TH DRIVE (10-3-1)
DUMMY DATA
INFORMATION ON THIRD STATE OF DISC (10-3-m)

FIG. 11A

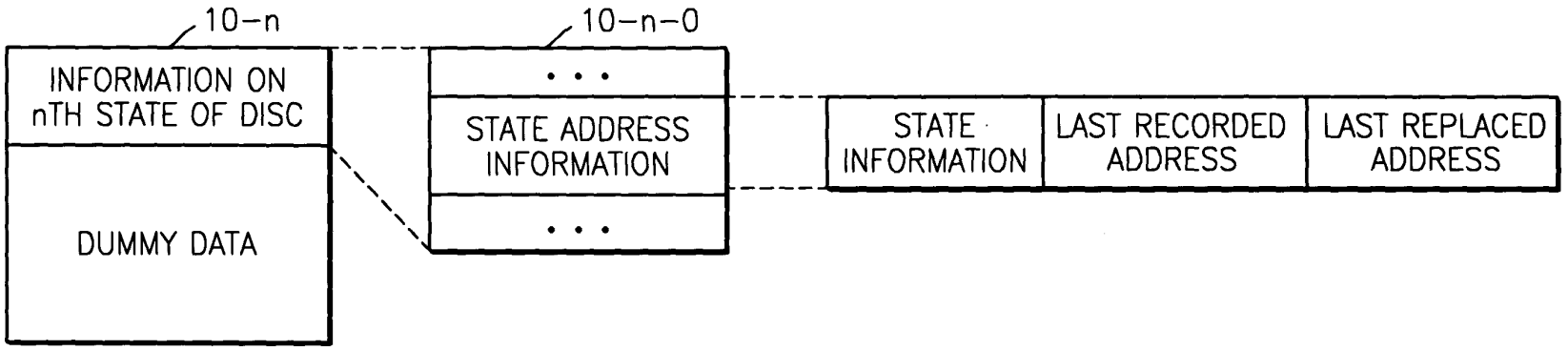

FIG. 11B

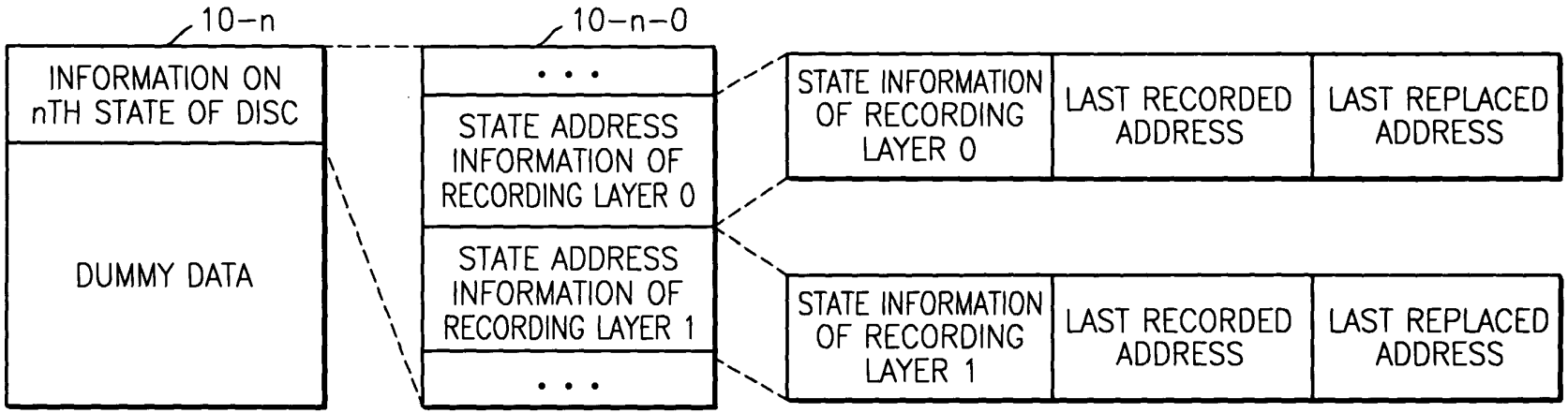

FIG. 11C

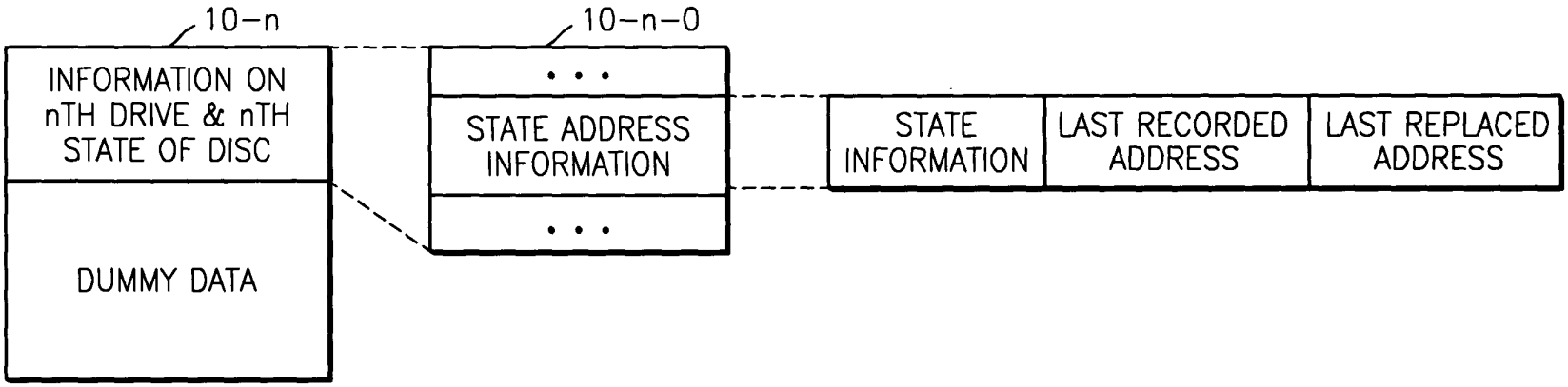

FIG. 11D

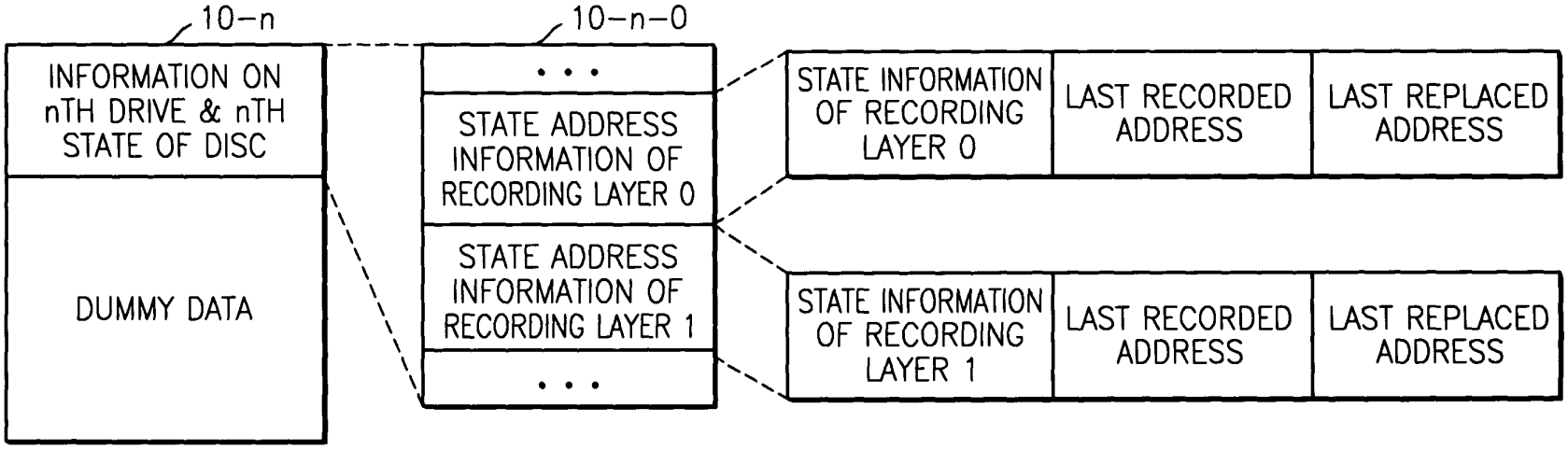

FIG. 12A

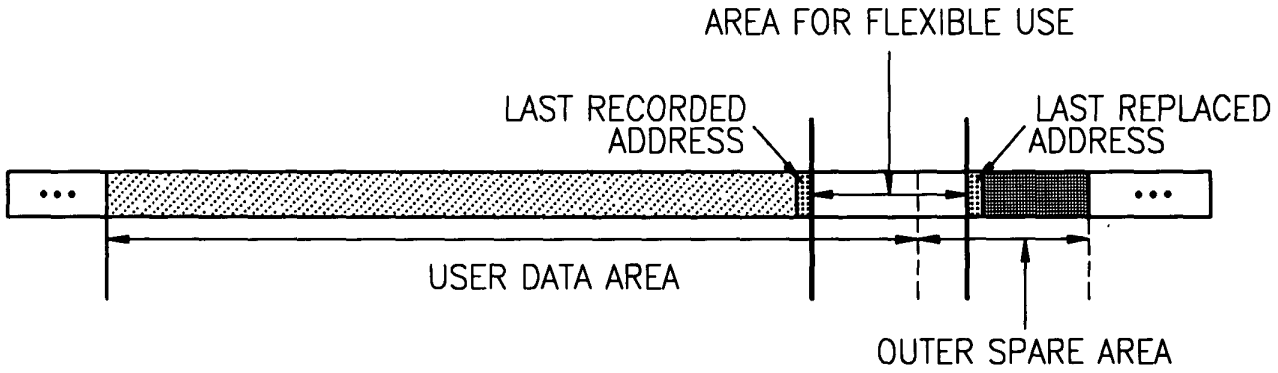

FIG. 12B

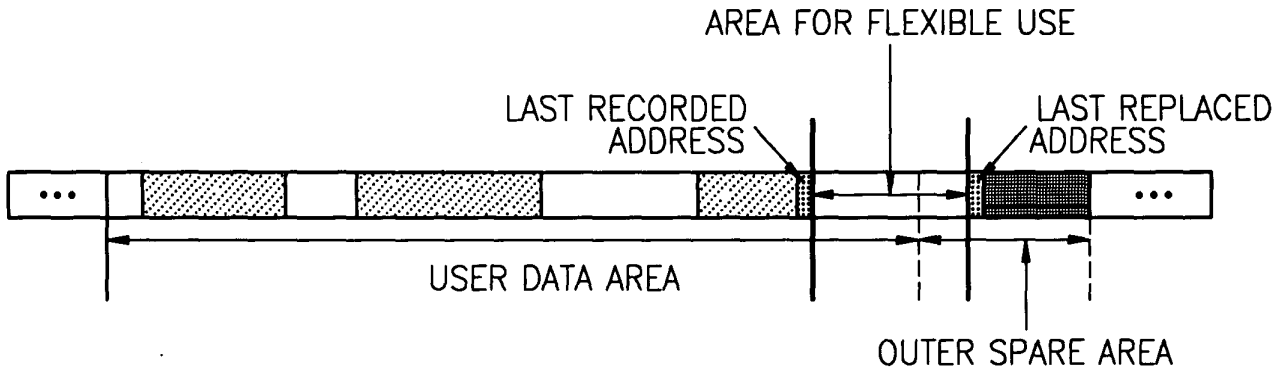

FIG. 13A

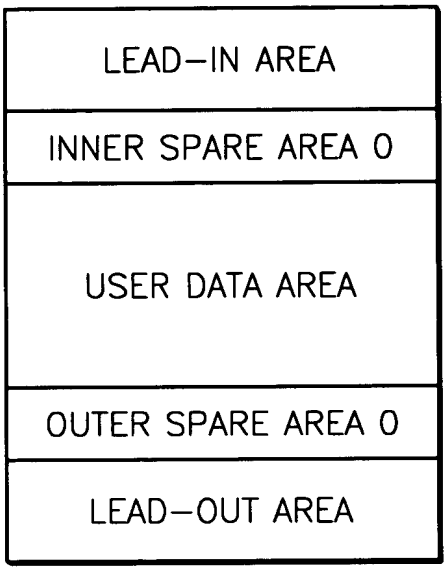

FIG. 13B

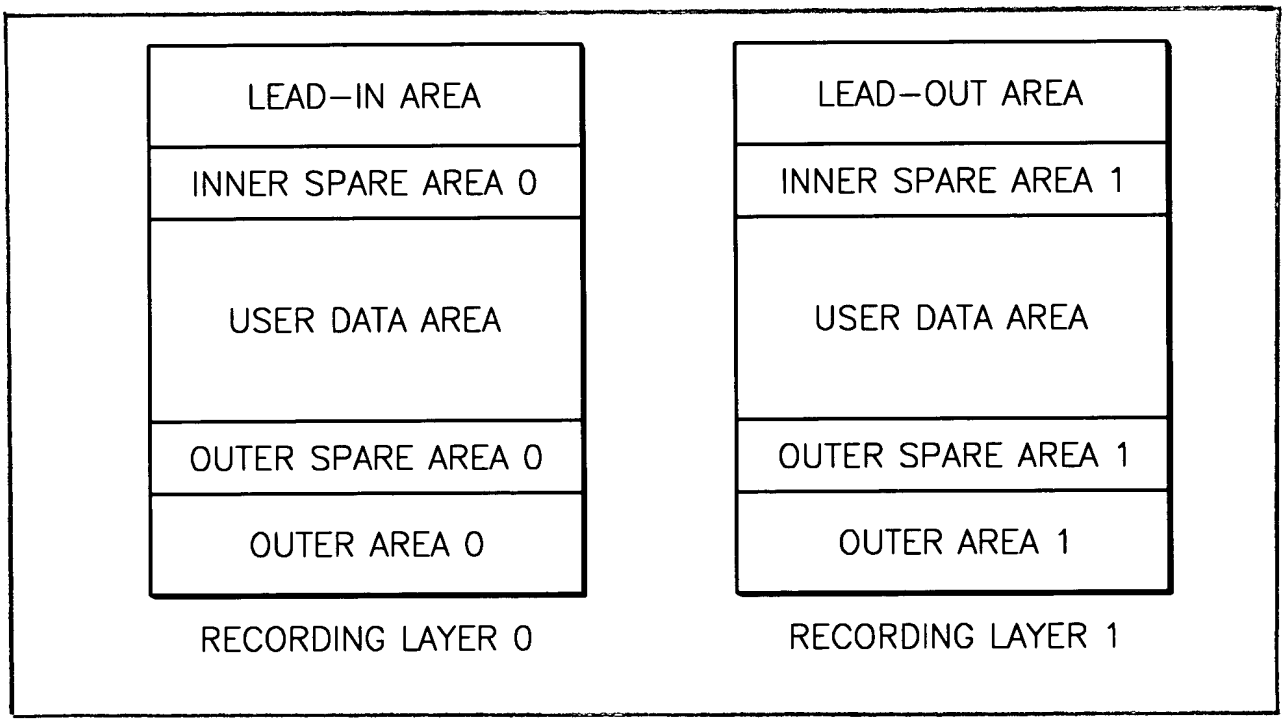

FIG. 14A

8BITS	28BITS	28BITS
STATE INFORMATION	LAST RECORDED ADDRESS	LAST REPLACED ADDRESS

FIG. 14B

4BITS	28BITS	4BITS	28BITS
STATE INFORMATION 1	LAST RECORDED ADDRESS	STATE INFORMATION 2	LAST REPLACED ADDRESS

FIG. 14C

8BITS	28BITS	28BITS
STATE INFORMATION OF RECORDING LAYER 0	LAST RECORDED ADDRESS	LAST REPLACED ADDRESS
STATE INFORMATION OF RECORDING LAYER 1	LAST RECORDED ADDRESS	LAST REPLACED ADDRESS

FIG. 14D

4BITS	28BITS	4BITS	28BITS
STATE INFORMATION OF RECORDING LAYER 0	LAST RECORDED ADDRESS	STATE INFORMATION 2 OF RECORDING LAYER 0	LAST REPLACED ADDRESS
STATE INFORMATION OF RECORDING LAYER 1	LAST RECORDED ADDRESS	STATE INFORMATION 2 OF RECORDING LAYER 1	LAST REPLACED ADDRESS